

CLAIMS

What is claimed is:

1 1. A computer-readable medium having stored thereon a
2 data structure comprising:

3 an instrumentation declaration comment containing data
4 representing a cross-hierarchical instrumentation entity;
5 and

6 an input port mapping comment containing data
7 representing a simulation event that is input into said
8 cross-hierarchical instrumentation entity to generate a
9 cross-hierarchical simulation event.

1 2. The computer-readable medium of claim 1, wherein said
2 input port mapping comment further comprises:

3 an instance identifier field containing data
4 representing a hierarchical list of design entities in
5 which said simulation event occurs; and

6 an event identifier field containing data representing
7 an instrumentation entity that generates said simulation
8 event.

1 3. The computer-readable medium of claim 2, wherein said
2 instance identifier field further comprises:

3 data representing a highest level design entity in
4 which said cross-hierarchical instrumentation entity is
5 instantiated;

6 data representing a lowest level design entity in
7 which said simulation event occurs; and

8 data representing intermediate design entities between
9 said highest level design entity and said lowest level
0 design entity.

1 4. The computer-readable medium of claim 2, wherein said
2 instance identifier field further includes data
3 representing a list of design entities in descending
4 hierarchical order.

1 5. The computer-readable medium of claim 2, wherein said
2 event identifier field further comprises:

3 a first event identifier sub-field containing data
4 representing an instance of said instrumentation entity;
5 and

6 a second event identifier sub-field containing data
7 representing an event type; and

8 a third event identifier sub-field containing data
9 representing an instance of said event.

1 6. A method for instrumenting a cross-hierarchical
2 simulation event, wherein said cross-hierarchical
3 simulation event is a function of a first simulation event
4 residing at a first level of simulation model hierarchy and
5 a second simulation event residing at a second level of
6 simulation model hierarchy, wherein said first level of
7 simulation model hierarchy is not at a lower level of said
8 simulation model hierarchy than said second level of
9 simulation model hierarchy, said method comprising:

10 defining a cross-hierarchical instrumentation entity
11 within said first level of simulation model hierarchy;

12 connecting a first input of said instrumentation
13 entity to said first simulation event and connecting a
14 second input of said instrumentation entity to said second
15 simulation event.

1 7. The method of claim 6, further comprising generating
2 a cross-hierarchical simulation event within said cross-
3 hierarchical instrumentation entity utilizing said first
4 simulation event and said second simulation event.

1 8. The method of claim 6, wherein said connecting step
2 further comprises identifying a list of design entities in
3 which said simulation event occurs.

1 9. The method of claim 6, wherein said connecting step
2 further comprises identifying an instrumentation entity
3 instantiated within said second level of simulation model
4 hierarchy that generates said second simulation event.